Pythagoras on the Geoboard

Activity 1. Areas of Tilted Squares

The Pythagorean theorem can be used to compute the area of the squares shown in Figure 1.
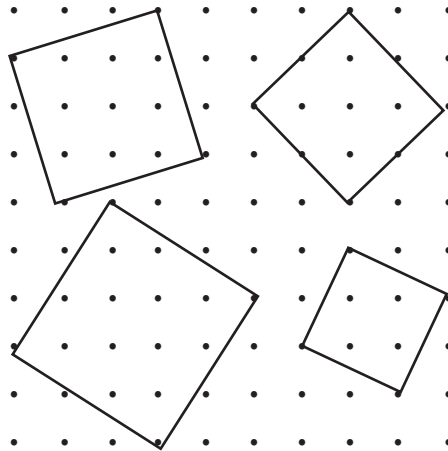

Figure 1

Given a tilted square on the geoboard, you can build a right triangle so that one side of the tilted square is the hypotenuse of the right triangle. Construct squares on the legs forming the right angle. Compute the areas of the squares on the legs and add them to obtain the area of the square on the hypotenuse. *What is the area of the square on the hypotenuse of the following figures?*
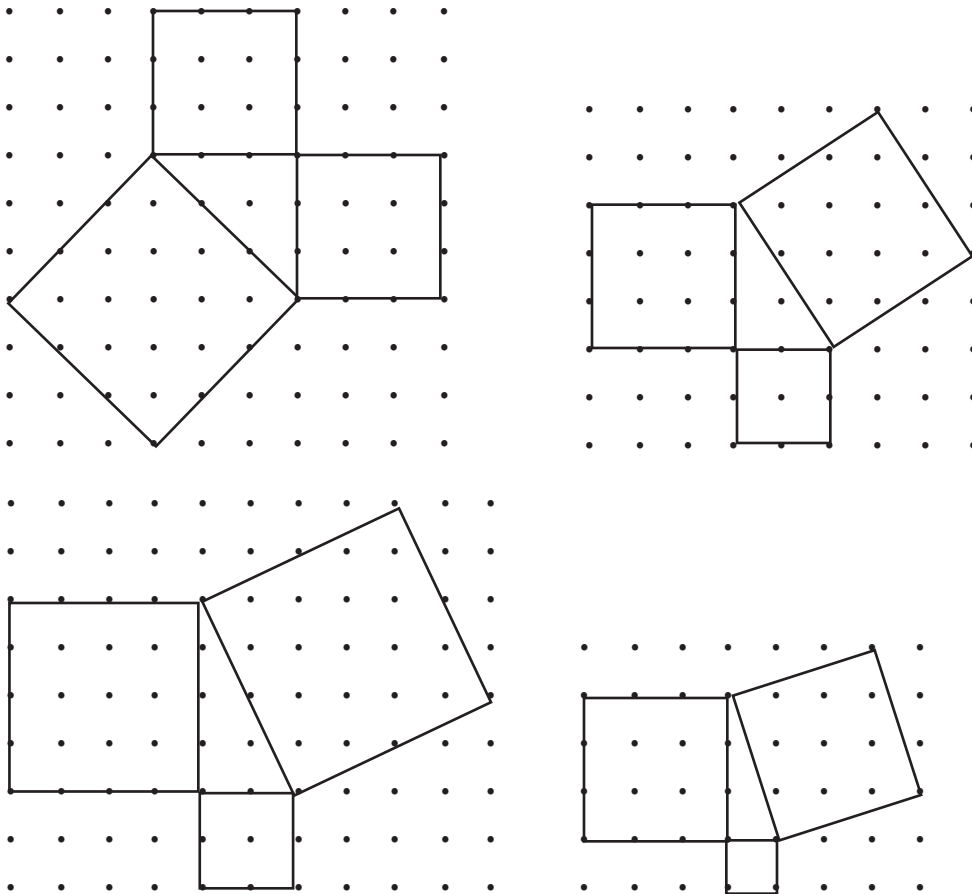

Figure 2